Operator's Manual

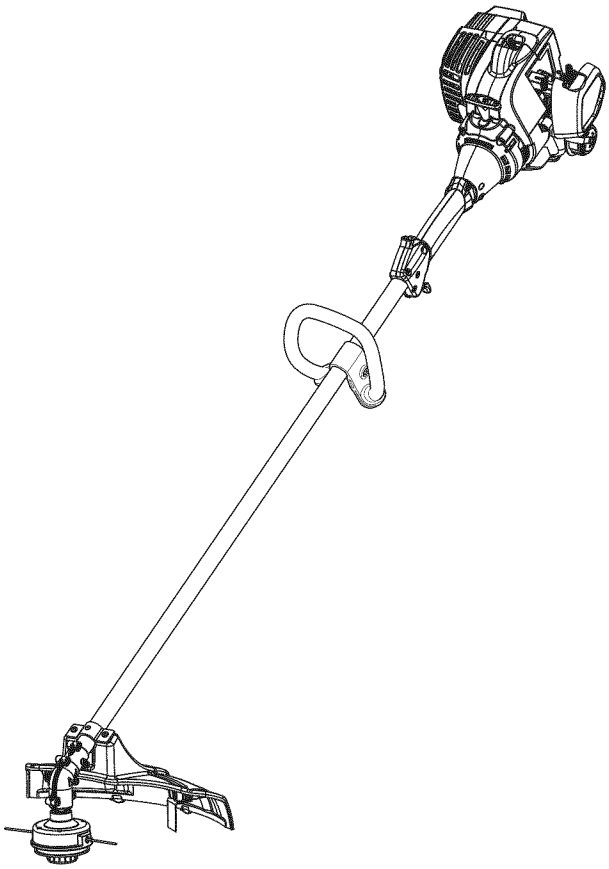
CRAFTSMAN®

2-Cycle

WEEDWACKER® GAS TRIMMER

Model No. 316.711471

INCREDI-PULL™
UNBELIEVABLE STARTING EASE™



- SAFETY
- ASSEMBLY
- OPERATION
- MAINTENANCE
- PARTS LIST
- ESPAÑOL, P. 19

CAUTION: Before using this product, read this manual and follow all its Safety Rules and Operating Instructions.

Sears Brands Management Corporation, Hoffman Estates, IL 60179 U.S.A.

Visit our website: www.craftsman.com

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All information, illustrations and specifications in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

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SAFETY

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL	MEANING
⚠	**DANGER:** Signals an EXTREME hazard. Failure to obey a safety **DANGER** signal **WILL** result in serious injury or death to yourself or to others.
⚠	**WARNING:** Signals a SERIOUS hazard. Failure to obey a safety **WARNING** signal **CAN** result in serious injury to yourself or to others.
⚠	**CAUTION:** Signals a MODERATE hazard. Failure to obey a safety **CAUTION** signal **MAY** result in property damage or injury to yourself or to others.

NOTE: Advises you of information or instructions vital to the operation or maintenance of the equipment.

SPARK ARRESTOR NOTE

NOTE: For users on U.S. Forest Land and in the states of California, Maine, Oregon and Washington. All U.S. Forest Land and the state of California (Public Resources Codes 4442 and 4443), Oregon and Washington require, by law that certain internal combustion engines operated on forest brush and/or grass-covered areas be equipped with a spark arrestor, maintained in effective working order, or the engine be constructed, equipped and maintained for the prevention of fire. Check with your state or local authorities for regulations pertaining to these requirements. Failure to follow these requirements could subject you to liability or a fine. **This unit is factory equipped with a spark arrestor.** Replacement requires **Muffler Assembly Part #753-06418,** installed at a Sears Parts & Repair Service Center.

⚠ **CALIFORNIA PROPOSITION 65**

WARNING: Engine exhaust, some of its constituents and certain finished components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

Read the operator's manual and follow all warnings and safety instructions. Failure to do so can result in serious injury to the operator and/or bystanders.

READ ALL INSTRUCTIONS BEFORE OPERATING

WARNING: When using the unit, all safety rules must be followed. Please read these instructions before operating the unit in order to ensure the safety of the operator and any bystanders. Please keep these instructions for later use.

- Read the instructions carefully. Be familiar with the controls and proper use of the unit.
- Do not operate this unit when tired, ill or under the influence of alcohol, drugs or medication.
- Children must not operate the unit. Teens must be accompanied and guided by an adult.
- Inspect the unit before use. Replace damaged parts. Check for fuel leaks. Make sure all fasteners are in place and secure. Replace parts that are cracked, chipped, or damaged in any way.
- Only use the trimming line described in the *Specifications* section of this manual. Never use metal-reinforced line, wire, chain or rope. These can break off and become dangerous projectiles.
- Be aware of risk of injury to the head, hands and feet.
- Clear the area to be cut before each use. Remove rocks, broken glass, nails, wire, string and other objects which may be thrown or become entangled in the trimmer attachment. Clear the area of children, bystanders and pets; keep them outside a 50-foot (15 m) radius, at a minimum. Even then, they are still at risk from thrown objects. Encourage bystanders to wear eye protection. If you are approached, stop the unit immediately.
- Squeeze the throttle control and check that it returns automatically to the idle position. Make all adjustments or repairs before using the unit.

SAFETY WARNINGS FOR GAS UNITS

WARNING: Gasoline is highly flammable and its vapors can explode if ignited. Take the following precautions:

- Store fuel only in containers specifically designed and approved for the storage of such materials.
- Always stop the engine and allow it to cool before filling the tank. Never remove the fuel tank cap or add fuel when the engine is hot. Always loosen the fuel tank cap slowly to relieve any pressure in the tank before fueling.
- Always mix and add fuel in a clean, well-ventilated outdoor area where there are no sparks or flames. DO NOT smoke.
- Never operate the unit without the fuel cap securely in place.
- Avoid creating a source of ignition for spilled fuel. Wipe up any spilled fuel from the unit immediately, before starting the unit. Move the unit at least 30 ft. (9.1 m) from the fueling source and site before starting the engine. DO NOT smoke.
- Never start or run the unit inside a closed room or building. Breathing exhaust fumes can kill. Operate this unit only in a well ventilated outdoor area.

WHILE OPERATING

- Wear safety glasses or goggles that meet ANSI Z87.1 standards and are marked as such. Wear ear/hearing protection when operating this unit. Wear a face or dust mask if the operation is dusty.
- Wear heavy long pants, boots, gloves and a long sleeve shirt. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair above shoulder level.
- The trimmer attachment shield must always be in place while operating the unit. Do not operate unit without both trimming lines extended, and the proper line installed. Do not extend the trimming line beyond the length of the shield.
- The cutting head will spin during idle speed adjustments. Wear protective clothing and observe all safety instructions to prevent serious personal injury.
- Adjust the handle to provide the best grip.
- Be sure the trimmer attachment is not in contact with anything before starting the unit.
- Use the unit only in daylight or good artificial light.
- Avoid accidental starting. Be in the starting position whenever pulling the starter rope. The operator and unit must be in a stable position while starting. Refer to *Starting and Stopping*.
- Use the right tool. Only use this tool for its intended purpose.
- Always hold the unit with both hands when operating. Keep a firm grip on both handles or grips.
- Keep hands, face, and feet away from all moving parts. Do not touch or try to stop the trimmer attachment when it rotates.
- Do not touch the engine, gear housing or muffler. These parts get extremely hot from operation, even after the unit is turned off.
- Do not operate the engine faster than the speed needed to cut, trim or edge. Do not run the engine at high speed when not cutting.
- Always stop the engine when cutting is delayed or when walking from one cutting location to another.
- If you strike or become entangled with a foreign object, stop the engine immediately and check for damage. Do not operate before repairing damage. Do not operate the unit with loose or damaged parts.
- Turn the engine to off and disconnect the spark plug for maintenance or repair.
- Use only original equipment manufacturer (OEM) replacement parts and accessories for this unit, as listed in the *Parts List* section of this manual. Use of any other parts or accessories could lead to serious injury to the user, or damage to the unit, and void the warranty.
- Keep the unit clean of vegetation and other materials that may become lodged between the cutting head and shield.
- To reduce fire hazard, replace a faulty muffler and spark arrestor. Keep the engine and muffler free from grass, leaves, excessive grease or carbon build up.

OTHER SAFETY WARNINGS

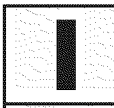
- All service, other than the maintenance procedures described in this manual, should be performed by a Sears or other qualified service dealer.
- Before inspecting, servicing, cleaning, storing, transporting or replacing any parts on the unit:
  1. Stop the unit.
  2. Make sure all moving parts have stopped.
  3. Allow the unit to cool.
  4. Disconnect the spark plug wire.
- Secure the unit while transporting.
- Never store the unit with fuel in the tank, inside a building where fumes may reach an open flame (pilot lights, etc.) or sparks (switches, electrical motors, etc.).
- Store the unit in a dry place, secured or at a height to prevent unauthorized use or damage. Keep the unit out of the reach of children.
- Never douse or squirt the unit with water or any other liquid. Keep handles dry, clean and free from debris. Clean the unit after each use. Refer to *Cleaning and Storage*.
- Keep these instructions. Refer to them often and use them to instruct other users. If you loan this unit to others, also loan them these instructions.

SAVE THESE INSTRUCTIONS

• SAFETY & INTERNATIONAL SYMBOLS •

This operator's manual describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating and maintenance and repair information.

SYMBOL	MEANING
	• **SAFETY ALERT SYMBOL** Indicates danger, warning or caution. May be used in conjunction with other symbols or pictographs.
	• **READ OPERATOR'S MANUAL** **WARNING:** Read the operator's manual(s) and follow all warnings and safety instructions. Failure to do so can result in serious injury to the operator and/or bystanders.
	• **WEAR EYE AND HEARING PROTECTION** **WARNING:** Thrown objects and loud noise can cause severe eye injury and hearing loss. Wear eye protection meeting ANSI Z87.1 standards and ear protection when operating this unit. Use a full face shield when needed.
	• **UNLEADED FUEL** Always use clean, fresh unleaded fuel.
	• **OIL** Refer to operator's manual for the proper type of oil.
	• **DO NOT USE E85 FUEL IN THIS UNIT** **WARNING:** It has been proven that fuel containing greater than 10% ethanol will likely damage this engine and void the warranty.

SYMBOL	MEANING
	• **ON/OFF STOP CONTROL** ON / START / RUN
	• **ON/OFF STOP CONTROL** OFF or STOP
	• **PRIMER BULB** Push primer bulb, fully and slowly, 10 times.
	• **CHOKE CONTROL** 1. • FULL choke position 2. • PARTIAL choke position 3. • RUN choke position
	• **THROWN OBJECTS AND ROTATING CUTTER CAN CAUSE SEVERE INJURY** **WARNING:** Small objects can be propelled at high speed, causing injury. Keep away from the rotating rotor.
	• **KEEP BYSTANDERS AWAY** **WARNING:** Keep all bystanders, especially children and pets, at least 50 feet (15 m) from the operating area.
	• **HOT SURFACE** **WARNING:** Do not touch a hot muffler or cylinder. You may get burned. These parts get extremely hot from operation. When turned off they remain hot for a short time.
	• **SHARP BLADE** **WARNING:** Sharp blade on trimmer attachment shield. To prevent serious injury, do not touch the line cutting blade.

WARRANTY

CRAFTSMAN TWO YEAR FULL WARRANTY

FOR TWO YEARS from the date of purchase, this product is warranted against any defects in material or workmanship. A defective product will receive free repair or replacement if repair is unavailable.

ADDITIONAL LIMITED WARRANTY on TRIMMER SHAFT

FOR THE THIRD THROUGH TENTH YEAR from the date of purchase, the outer metal housing of the trimmer shaft is warranted against any defects in material or workmanship. With proof of purchase, a new housing will be supplied free of charge. You are responsible for the labor cost of installation. This additional coverage does not apply to inner trimmer shaft components.

For warranty coverage details to obtain free repair or replacement, visit the web site: www.craftsman.com

This warranty covers ONLY defects in material and workmanship. Warranty coverage does NOT include:

- Expendable items that can wear out from normal use within the warranty period, such as cutting line, spark plugs, or filters.
- Product damage resulting from user attempts at product modification or repair or caused by product accessories.
- Repairs necessary because of accident or failure to operate or maintain the product according to all supplied instructions.
- Preventive maintenance, or repairs necessary due to improper fuel mixture, contaminated or stale fuel.

This warranty is void if this product is ever used while providing commercial services or if rented to another person.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears Brands Management Corporation, Hoffman Estates, IL 60179

To order parts or schedule service for this product, call 1-800-469-4663.

KNOW YOUR UNIT

APPLICATIONS

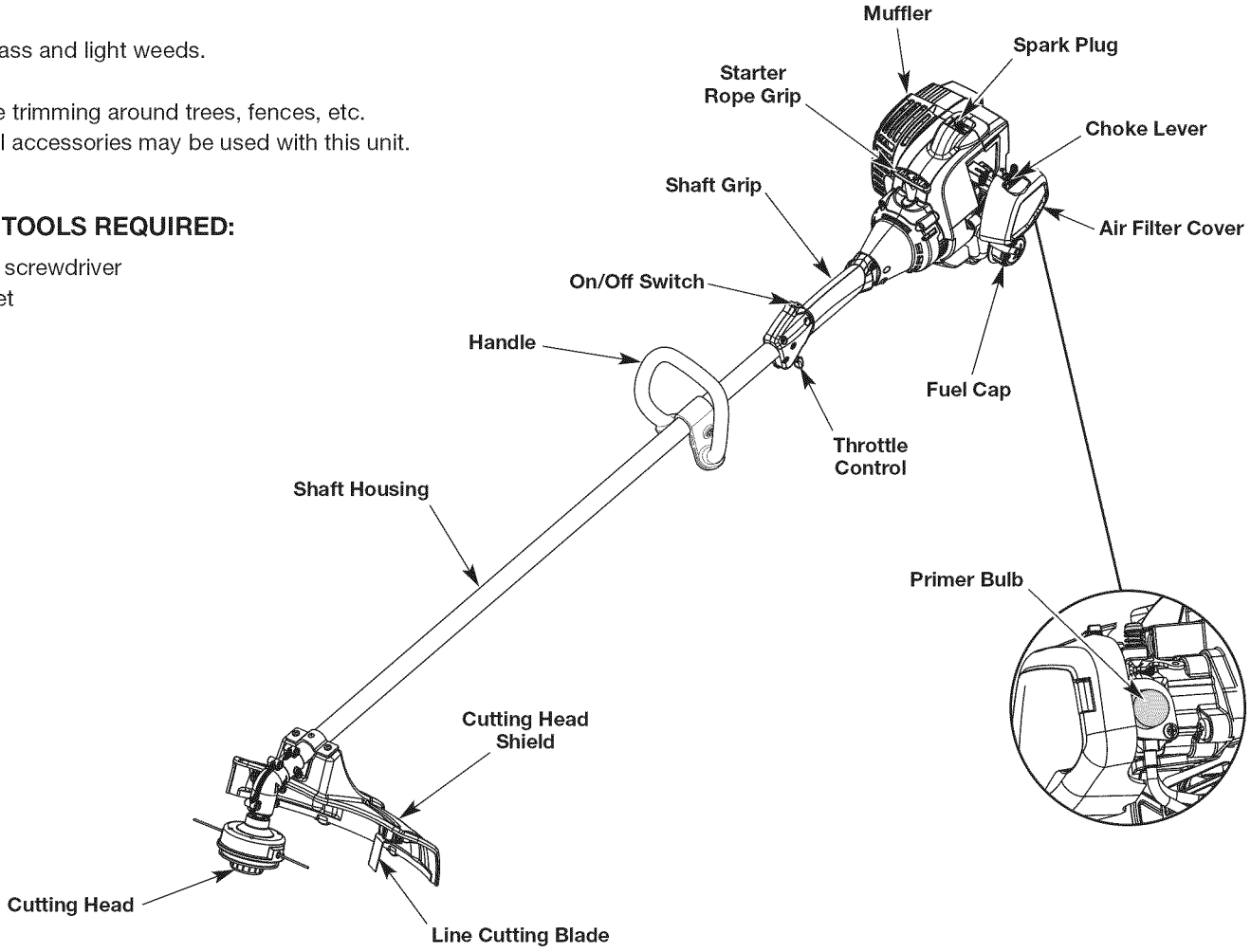
As a trimmer:

- Cutting grass and light weeds.
- Edging
- Decorative trimming around trees, fences, etc.

Other optional accessories may be used with this unit.

ASSEMBLY TOOLS REQUIRED:

- #2 Phillips screwdriver
- 3/8" Socket



SPECIFICATIONS*

Engine Type	Air-Cooled, 2-Cycle
Displacement	25 cc (1.52 cu. in.)
Spark Plug Gap	0.025 in. (0.635 mm)
Spark Plug	Champion® RDJ7J or equivalent plug
Lubrication	Fuel/Oil Mixture
Fuel/Oil Ratio	40:1
Fuel Tank Capacity	10 oz. (295 ml)
Approximate Unit Weight (No fuel, with Bump Head™, cutting head shield and handle)	10 - 11 lbs. (4.5 - 5 kg)
Trimmer Mechanism	Bump Head
Trimming Line Diameter	0.095 inches (2.41 mm)
Cutting Path Diameter	17 in. (43.18 cm)

* All specifications are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

ASSEMBLY

INSTALLING THE CUTTING HEAD SHIELD

WARNING: To prevent serious personal injury, never operate the unit without the cutting head shield in place.

Use the following instructions if the cutting head shield is not installed. Use only the instructions that apply to the type of shaft and shield equipped with this unit.

1. Place the cutting head shield onto the mount bracket. Align the holes in the cutting head shield with the holes in the mount bracket. (Fig. 1)
2. Screw the 2 screws through the mount bracket and into the cutting head shield until finger tight.
3. Using a #2 Phillips screwdriver, tighten the screws until the cutting head shield is firmly in place. Tighten the screws equally. The gap between the mount bracket and the cutting head shield should be the same on each side.

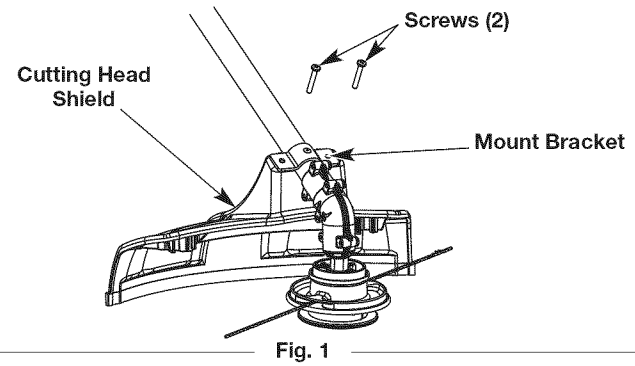


Fig. 1

INSTALLING AND ADJUSTING THE HANDLE

Installing the Handle

1. Push the handle down onto the shaft housing (Fig. 2). The bolt hole in the handle should be to the right.
2. Insert the bolt into the bolt hole and push it through (Fig. 2). Tighten the bolt with a 3/8" socket, but do not tighten the bolt completely.
3. While holding the unit in the operating position (Fig. 6), move the handle to the location that provides the best grip. Place it a minimum of 6 inches (15.24 cm) from the end of the shaft grip (Fig. 2).
4. Tighten the bolt with a 3/8" socket until the handle is secure.

Adjusting the Handle

If the handle requires adjustment:

1. Loosen the bolt with a 3/8" socket (Fig. 2).
2. While holding the unit in the operating position (Fig. 6), move the handle to the location that provides the best grip. Place it a minimum of 6 inches (15.24 cm) from the end of the shaft grip (Fig. 2).
3. Tighten the bolt with a 3/8" socket until the handle is secure.

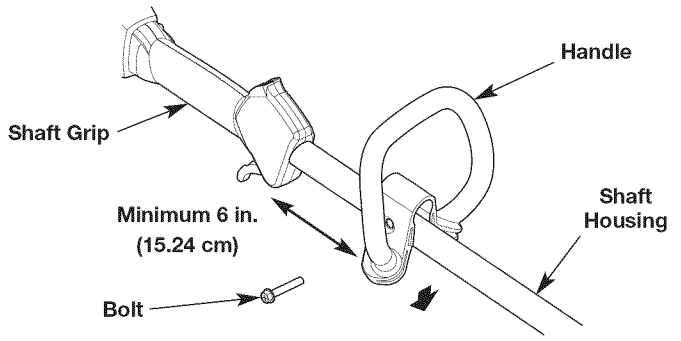


Fig. 2

OIL AND FUEL

OIL AND FUEL MIXING INSTRUCTIONS

The use of old and/or improperly mixed fuel is the most common cause of performance problems. Use only fresh, clean unleaded gasoline. Follow the instructions carefully for the proper gasoline/oil mixture.

Definition of Blended Fuels

Today's fuels are often a blend of gasoline and oxygenates such as ethanol, methanol or MTBE (ether). Alcohol-blended fuel absorbs water. As little as 1% water in the fuel can make fuel and oil separate, forming acids when stored. ALWAYS use fresh fuel (less than 30 days old).

NOTE: Dispose of old fuel according to federal, state and local regulations.

Using Blended Fuels

If using a blended fuel:

- Always use the fresh fuel mix explained in your operator's manual
- Use the fuel additive STA-BIL® or an equivalent
- Always agitate the fuel mix before fueling the unit
- Drain the tank and run the engine dry before storing the unit

WARNING: DO NOT USE E85 FUEL IN THIS UNIT. It has been proven that fuel containing greater than 10% ethanol will likely damage this engine and void the warranty.

Using Fuel Additives

The bottle of 2-cycle oil provided with this unit contains a fuel additive to help inhibit corrosion and minimize gum deposits. Always use the brand of 2-cycle oil that came with this unit. If this is unavailable, use a 2-cycle oil designed for air-cooled engines and mix it with a fuel additive, such as STA-BIL Fuel Stabilizer or an equivalent. Add 0.8 oz. (23 ml) of fuel additive per gallon of fuel, according to the instructions on the container. NEVER add fuel additives directly to the unit's fuel tank.

Mixing the Fuel

NOTE: This unit comes with a 3.2 oz. bottle of 2-cycle oil. To obtain the correct fuel mixture described below, pour the entire bottle into one gallon of unleaded gasoline.

CAUTION: For proper engine operation and maximum reliability, pay strict attention to the gasoline and oil mixing instructions on the 2-cycle oil bottle. Using improperly mixed fuel can severely damage the engine.

Thoroughly mix the proper ratio of unleaded gasoline with 2-cycle engine oil. Do not mix them directly in the unit's fuel tank. Use a separate fuel can. Use a 40:1 gasoline/oil ratio. See the table below for specific gasoline and oil mixing ratios.

Unleaded gasoline	2-cycle oil
1 gallon U.S. (3.8 liters)	3.2 fl. oz. (95 ml)
1 liter	25 ml

MIXING RATIO - 40:1

FUELING THE UNIT

WARNING: Gasoline is extremely flammable. Ignited vapors may explode. Always stop the engine and allow it to cool before filling the fuel tank. Do not smoke while filling the tank. Keep sparks and open flames at a distance from the area.

WARNING: Remove the fuel cap slowly to avoid injury from fuel spray. Never operate the unit without the fuel cap securely in place.

WARNING: Add fuel in a clean, well ventilated outdoor area. Wipe up any spilled fuel immediately. Avoid creating a source of ignition for spilled fuel. Do not start the engine until fuel vapors dissipate.

1. Position the unit with the fuel cap facing up.
2. Remove the fuel cap.
3. Place the fuel container spout into the fill hole on the fuel tank and fill the tank.

NOTE: Do not overfill the tank.

4. Wipe up any fuel that may have spilled.
5. Reinstall the fuel cap.
6. Move the unit at least 30 ft. (9.1 m) from the fuel container and the fueling site before starting the engine.

STARTING AND STOPPING

WARNING: Operate this unit only in a well-ventilated outdoor area. Carbon monoxide exhaust fumes can be lethal in a confined area.

WARNING: Avoid accidentally starting the unit. To avoid serious injury, the operator and the unit must be in a stable position when pulling the starter rope (Fig. 5).

STARTING INSTRUCTIONS

1. Mix gasoline with oil. Refer to *Oil and Fuel Mixing Instructions*.
2. Fill the fuel tank. Refer to *Fueling the Unit*.

NOTE: There is no need to turn the unit on. The On/Off switch is in the ON (I) position at all times (Fig. 3).

3. Slowly press and release the primer bulb **10 times** (Fig. 4). If fuel cannot be seen in the primer bulb, press and release the primer bulb until fuel is visible.
4. Move the choke lever to **Position 1** (Fig. 4).
5. Crouch in the starting position (Fig. 5).

NOTE: SQUEEZE and **HOLD** the throttle control for **ALL** further steps.

6. Squeeze the throttle control (Fig. 3) and pull the starter rope with a controlled and steady motion **5 times** (Fig. 5).

NOTE: This unit uses the **INCREDI-PULL™** starting system, which significantly reduces the effort required to start the engine.

7. Continue to squeeze the throttle control. Move the choke lever to **Position 2** (Fig. 4).
8. Continue to squeeze the throttle control. Pull the starter rope with a controlled and steady motion **3 to 5 times** to start the engine.
9. Continue to squeeze the throttle control. Allow the engine to warm up for 30 to 60 seconds.
10. Continue to squeeze the throttle control. Move the choke lever to **Position 3** (Fig. 4) and continue warming the engine for an additional 60 seconds. The unit may be used during this time.

NOTE: The engine is properly warmed up when it accelerates without hesitation.

IF... the engine hesitates, return the choke lever to **Position 2** (Fig. 4) and continue the warm-up.

IF... the engine does not start, go back to step 3.

IF... the engine fails to start after a few attempts, move the choke lever to **Position 3** and squeeze the throttle control. Pull the starter rope with a controlled and steady motion **3 to 8 times**. The engine should start. If it does not, repeat this instruction.

IF... the engine is already warm, go back to step 7.

STOPPING INSTRUCTIONS

1. Release the throttle control and allow the engine to idle.
2. Press and hold the On/Off switch in the OFF (O) position until the engine comes to a complete stop (Fig. 3).

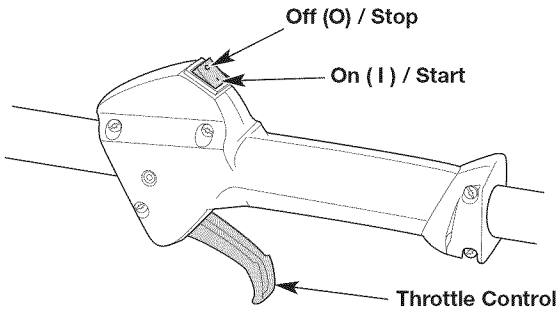


Fig. 3

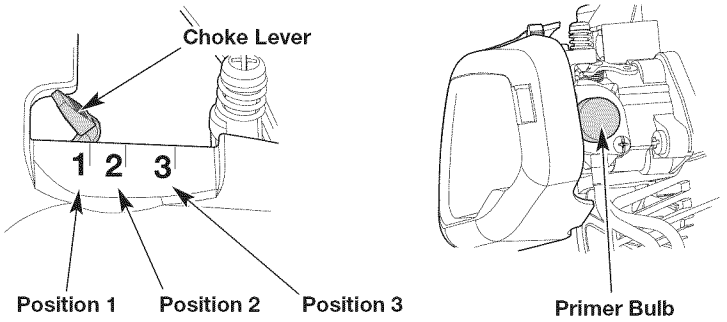


Fig. 4

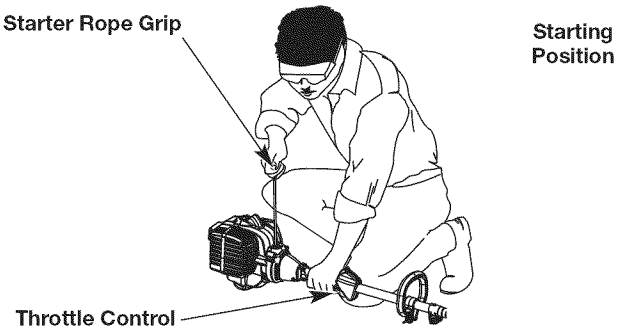


Fig. 5

OPERATION

HOLDING THE TRIMMER

WARNING: Always wear eye, hearing, hand, foot and body protection to reduce the risk of injury when operating this unit.

- Stand in the operating position (Fig. 6).
- Hold the shaft grip with the right hand. Keep the right arm slightly bent.
- Hold the handle with the left hand. Keep the left arm straight.
- Hold the unit at waist level.
- Keep the cutting head parallel to the ground so that it easily contacts the grass without the need for bending over.

Fig. 6

ADJUSTING THE TRIMMING LINE LENGTH

This unit is equipped with a Bump Head. Trimming line can be released from the cutting head without stopping the engine.

To release more line, lightly tap the bump knob on the ground (Fig. 7) while operating the unit at high speed. For best results, tap the bump knob on bare ground or hard soil. Attempting to release line in tall grass may stall the engine.

NOTE: Do not rest the cutting head on the ground while the unit is running.

Each time the bump knob is tapped, about 1 inch (25.4 mm) of trimming line is released.

NOTE: Always keep the trimming line fully extended. Line release becomes more difficult when the cutting line gets shorter.

A blade in the cutting head shield will cut the line to the proper length if any excess line is released.

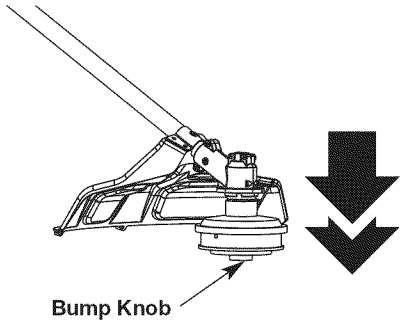


Fig. 7

CAUTION: Do not remove or alter the line cutting blade assembly. Excessive line length will make the unit overheat. This may lead to serious personal injury or damage to the unit.

TIPS FOR BEST TRIMMING RESULTS

- Keep the cutting head parallel to the ground.
- Cut from left to right whenever possible. This improves the unit's cutting efficiency and throws clippings away from the operator.
- Do not trim wet grass or weeds.

NOTE: Some line breakage will occur from:

- Entanglement with foreign matter
- Normal line fatigue
- Attempting to cut thick vegetation
- Forcing the line into objects such as walls or fence posts

DECORATIVE TRIMMING

When trimming around trees, posts, fences, etc., rotate the whole unit so that the cutting head is at a 30° angle to the ground (Fig. 8).

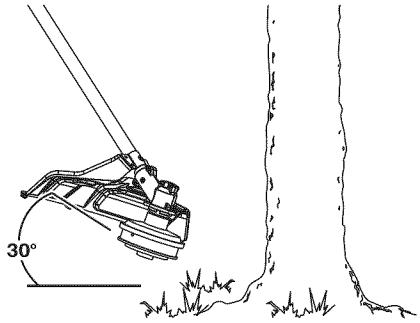


Fig. 8

WARNING: To prevent serious injury, never perform maintenance or repairs while the unit is running. Always allow the unit to cool before servicing or repairing the unit. Disconnect the spark plug wire to prevent the unit from starting accidentally.

MAINTENANCE SCHEDULE

Perform these required maintenance procedures at the frequency stated in the table. These procedures should also be a part of any seasonal tune-up.

NOTE: Some maintenance procedures may require special tools or skills. If unsure about these procedures, take the unit to a Sears or other qualified service dealer. Call **1-800-4-MY-HOME** for more information.

NOTE: Maintenance, replacement, or repair of the emission control devices and system may be performed by a Sears or other qualified service dealer. Call **1-800-4-MY-HOME** for more information.

NOTE: Please read the California/EPA statement that came with the unit for a complete listing of terms and coverage for the emissions control devices, such as the spark arrestor, muffler, carburetor, etc.

FREQUENCY	MAINTENANCE REQUIRED
Every 10 hours	Clean and re-oil the air filter. Refer to *Maintaining the Air Filter*.
Every 25 hours	Check the spark plug condition and gap. Refer to *Maintaining the Spark Plug*.

REPLACING THE TRIMMING LINE

Only use the trimming line described in the *Specifications* section. Other types of trimming line may cause the engine to overheat or fail.

WARNING: Never use metal-reinforced line, wire, chain or rope. These can break off and become dangerous projectiles.

NOTE: Always use the correct line length when installing trimming line. The line may not release properly if the line is too long.

Part 1 - Removing the Inner Reel

1. Hold the outer spool with one hand and unscrew the bump knob counterclockwise (Fig. 9).

NOTE: The outer spool will remain attached to the unit.

2. Inspect the bolt inside the bump knob to make sure it moves freely. Replace the bump knob if it is damaged.
3. Remove the inner reel from the outer spool (Fig. 10).
4. Remove the spring from the inner reel (Fig. 10).
5. Use a clean cloth to clean the inner reel, spring, shaft and inner surface of the outer spool.
6. Check the indexing teeth and holding slots for wear (Fig. 11). If necessary, remove burrs or replace the inner reel and outer spool.

Proceed to Part 2 - Winding New Trimming Line onto the Inner Reel.

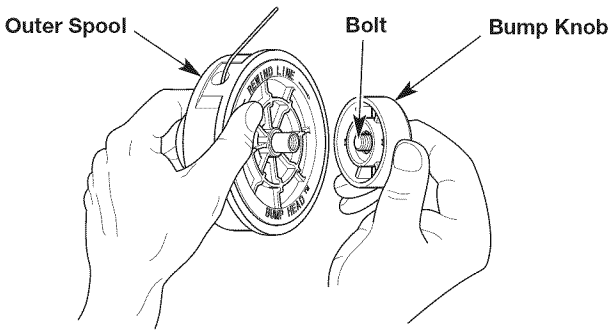


Fig. 9

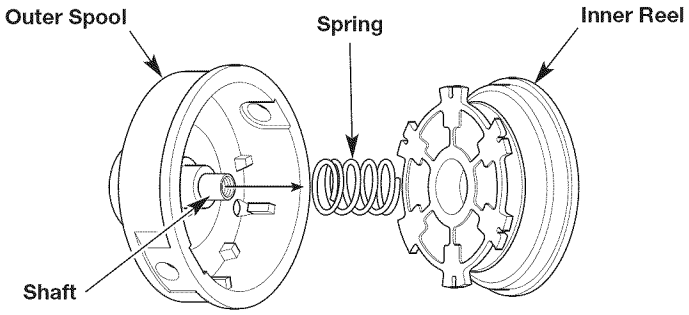


Fig. 10

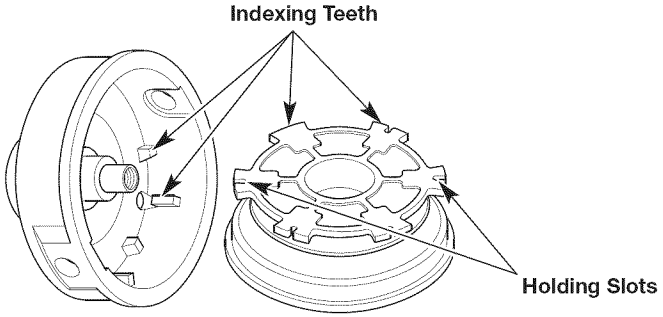


Fig. 11

Part 2 - Winding New Trimming Line onto the Inner Reel

- If using single line, refer to *Winding Single Line*.
- If using split line, refer to *Winding Split Line*.
- If using a prewound inner reel, proceed to *Part 3 - Installing the Inner Reel*.

Winding Single Line

1. Cut one 12-foot (3.7 m) length of new single trimming line. Fold the line in half to create a loop in the middle.
2. Insert the loop into the slot in the split wall (Fig. 12). Wind the line tightly in the direction shown on the bottom of the inner reel until about 6 inches (150 mm) of line remains. Keep the top half of the line above the split wall and the bottom half of the line below the split wall.
3. Insert the two 6-inch sections into the two .095 holding slots (Fig. 14).

NOTE: Failure to wind the line in the direction indicated will cause the cutting head to operate incorrectly.

Proceed to Part 3 - Installing the Inner Reel.

Winding Split Line

1. Cut one 6-foot (1.8 m) length of new split line trimming line. Split each end about 6 inches (150 mm).
2. Using one split end, insert one line into the top hole and the other line into the bottom hole in the inner reel (Fig. 13).
3. Wind the line tightly in the direction shown on the bottom of the inner reel. The split wall will automatically divide the line. Wind the line until it is completely divided and about 6 inches (150 mm) of line remains.

NOTE: Failure to wind the line in the direction indicated will cause the cutting head to operate incorrectly.

4. Insert the two 6-inch sections into the two .095 holding slots (Fig. 14).

Proceed to Part 3 - Installing the Inner Reel.

Part 3 - Installing the Inner Reel

1. Pass the two line ends through the eyelets in the outer spool. Place the spring inside the inner reel. Insert the inner reel into the outer spool. Push the inner reel and outer spool together (Fig. 15).

NOTE: The spring must be assembled on the inner reel before reassembling the cutting head.

2. While holding the inner reel and outer spool together, firmly pull the two line ends to release them from the holding slots.
3. While holding the inner reel and outer spool together, screw the bump knob on clockwise. Tighten the bump knob securely.

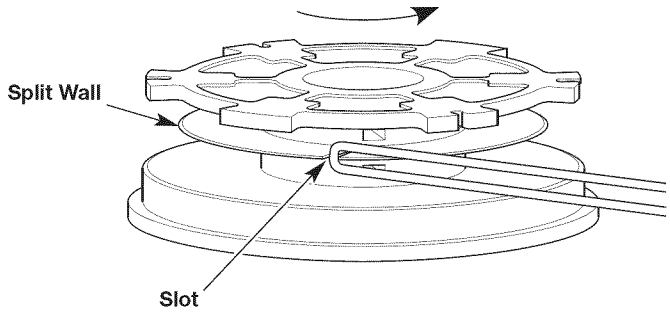


Fig. 12

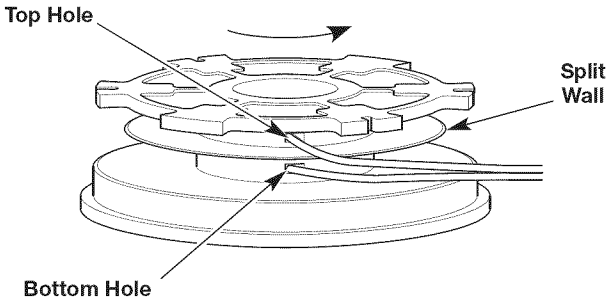


Fig. 13

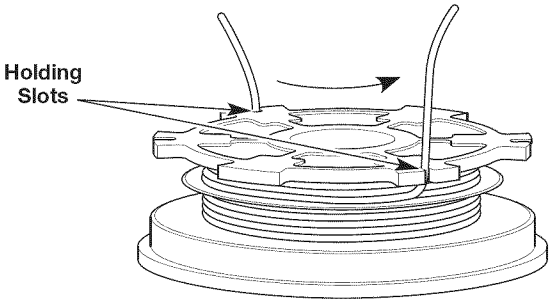


Fig. 14

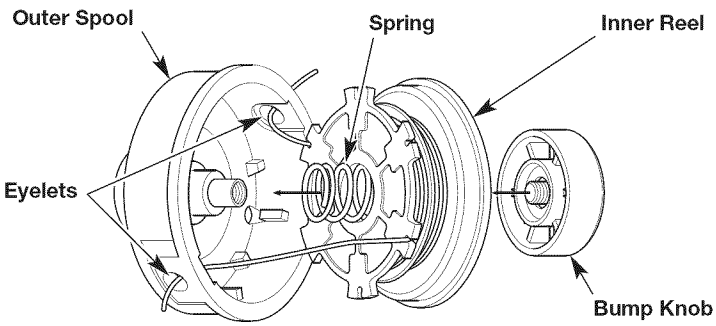


Fig. 15

MAINTAINING THE AIR FILTER

WARNING: To avoid serious personal injury, always stop the engine and allow it to cool before cleaning or maintaining the unit.

Failure to maintain the air filter can result in poor performance or can cause permanent damage to the engine. Engine failure due to improper air filter maintenance is not covered by the product warranty.

Cleaning the Air Filter

1. Open the air filter cover: press in the lock tab and swing the air filter cover to the right (Fig. 16).
2. Remove the air filter from inside the air filter cover (Fig. 16).
3. Wash the air filter in detergent and water. Rinse the air filter thoroughly and allow it to dry.
4. Lightly coat the air filter with clean SAE 30 oil.
5. Squeeze the air filter to spread and remove excess oil.
6. Reinstall the air filter inside the air filter cover (Fig. 16).

NOTE: Operating the unit without the air filter and air filter cover will VOID the warranty.

7. Close the air filter cover: swing the air filter cover to the left and press it closed until the lock tab snaps into place (Fig. 16).

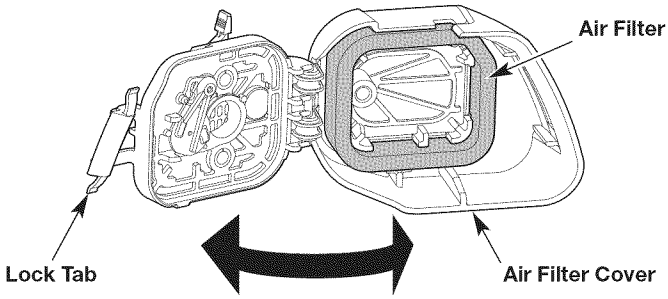


Fig. 16

ADJUSTING THE IDLE SPEED

WARNING: The cutting head will spin during idle speed adjustments. Wear protective clothing and observe all safety instructions to prevent serious personal injury.

NOTE: Careless adjustments can seriously damage the unit. A Sears or other qualified service dealer should make carburetor adjustments.

If, after checking the fuel and cleaning the air filter, the engine still will not idle, adjust the idle speed screw as follows:

1. Start the engine. Refer to *Starting and Stopping*.
2. Release the throttle control and let the engine idle. If the engine stops, use a small Phillips screwdriver to turn the idle speed screw clockwise, 1/8 of a turn at a time (as needed) until the engine idles smoothly (Fig. 17).
3. If the engine is idling too quickly, turn the idle speed screw counterclockwise, 1/8 of a turn at a time (as needed) to reduce the idle speed (Fig. 17).

Checking the fuel, cleaning the air filter, and adjusting the idle speed should solve most engine problems. If not, and any of the following conditions are true, take the unit to a Sears or other qualified service dealer:

- the engine will not idle
- the engine hesitates or stalls on acceleration
- there is a loss of engine power

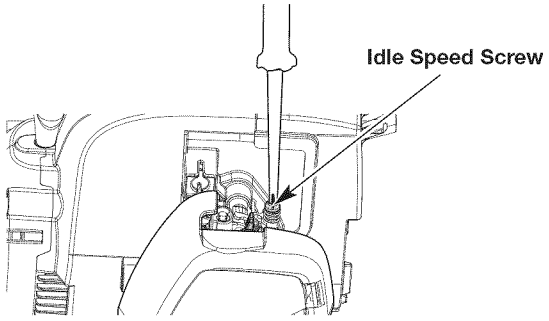


Fig. 17

MAINTAINING THE SPARK PLUG

1. Stop the engine and allow it to cool. Grasp the spark plug boot firmly and pull it from the spark plug.
2. Clean around the spark plug. Remove the spark plug from the cylinder head with a 5/8-inch socket, turning counterclockwise.

> **WARNING:** Do not sand blast, scrape or clean spark plug electrodes. Grit in the engine could damage the cylinder.

3. Inspect the spark plug. If the spark plug is cracked, fouled or dirty, replace it with replacement part **#753-06193**, a **Champion RDJ7J** or an equivalent spark plug.
4. Use a feeler gauge to set the air gap at **0.025 in. (0.635 mm)** (Fig. 18).
5. Install the spark plug in the cylinder head. Tighten the spark plug with a 5/8-inch socket, turning it clockwise until snug.

NOTE: If using a torque wrench, torque to:

110-120 in.•lb. (12.3-13.5 N•m). Do not over tighten.

6. Reattach the spark plug boot.

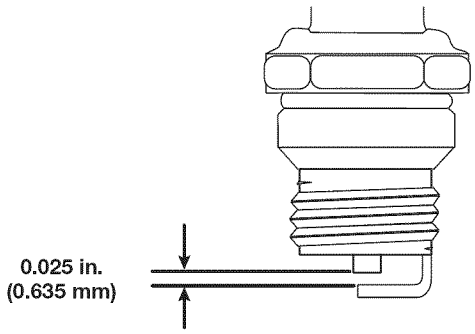


Fig. 18

CLEANING AND STORAGE

CLEANING

WARNING: To avoid serious personal injury, always stop the engine and allow it to cool before cleaning or maintaining the unit.

Use a small brush to clean the outside of the unit. Do not use strong detergents. Household cleaners that contain aromatic oils such as pine and lemon, and solvents such as kerosene, can damage plastic. Wipe off any moisture with a soft cloth.

STORAGE

- Never store a fueled unit where fumes may reach an open flame or spark.
- Allow the engine to cool before storing.
- Lock up the unit to prevent unauthorized use or damage.
- Store the unit in a dry, well-ventilated area.
- Store the unit out of the reach of children.

Short-term Storage (1-2 weeks)

1. Store the unit in a horizontal position. If this is not possible, store the unit vertically with the engine at the top.

Long-term Storage

1. Remove the fuel cap, tip the unit and drain the fuel into an approved container. Reinstall the fuel cap.
2. Start the engine and allow it to run until it stalls. This ensures that all fuel has been drained from the carburetor.
3. Allow the engine to cool. Remove the spark plug and put 5 drops of any high quality motor oil or 2-cycle oil into the cylinder. Pull the starter rope slowly to distribute the oil. Reinstall the spark plug.
4. Thoroughly clean the unit and inspect it for any loose or damaged parts. Repair or replace damaged parts and tighten loose screws, nuts or bolts.

Preparing the Unit for Use after Long-term Storage

1. Remove the spark plug and drain all of the oil from the cylinder.

NOTE: Do not use fuel that has been stored for more than 30 days. Dispose of old fuel according to federal, state and local regulations.

TROUBLESHOOTING

PROBLEM	SOLUTION
THE ENGINE WILL NOT START	
The fuel tank is empty	Fill the fuel tank with properly mixed fuel
The primer bulb was not pressed enough	Press the primer bulb 10 times or until fuel is visible
The engine is flooded	Move the choke lever to Position 3, squeeze the throttle control and pull the starter rope
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly mixed fuel
The spark plug is fouled	Replace the spark plug
THE ENGINE WILL NOT IDLE	
The air filter is dirty	Clean or replace the air filter
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly mixed fuel
The idle speed is incorrect	Adjust the idle speed
THE ENGINE WILL NOT ACCELERATE	
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly mixed fuel
The cutting head is bound with grass	Stop the engine and clean the cutting head
The air filter is dirty	Clean or replace the air filter
THE ENGINE LACKS POWER OR STALLS WHEN CUTTING	
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly mixed fuel
The air filter is dirty	Clean or replace the air filter
The spark plug is fouled	Replace the spark plug
THE CUTTING HEAD WILL NOT ADVANCE LINE	
The cutting head is bound with grass	Clean the cutting head
The cutting head is out of line	Refill the cutting head with new line
The inner reel is bound up	Rewind the line
The cutting head is dirty	Clean the inner reel and outer spool
The line is welded	Open the cutting head and remove the welded section
The line is twisted	Rewind the line
Not enough line is extended	Push the bump knob and pull the line until 4 inches (102 mm) is outside of the cutting head
THE CUTTING LINE ADVANCES UNCONTROLLABLY	
There is oil, cleaner or lubricant in the cutting head	Clean and thoroughly dry the cutting head

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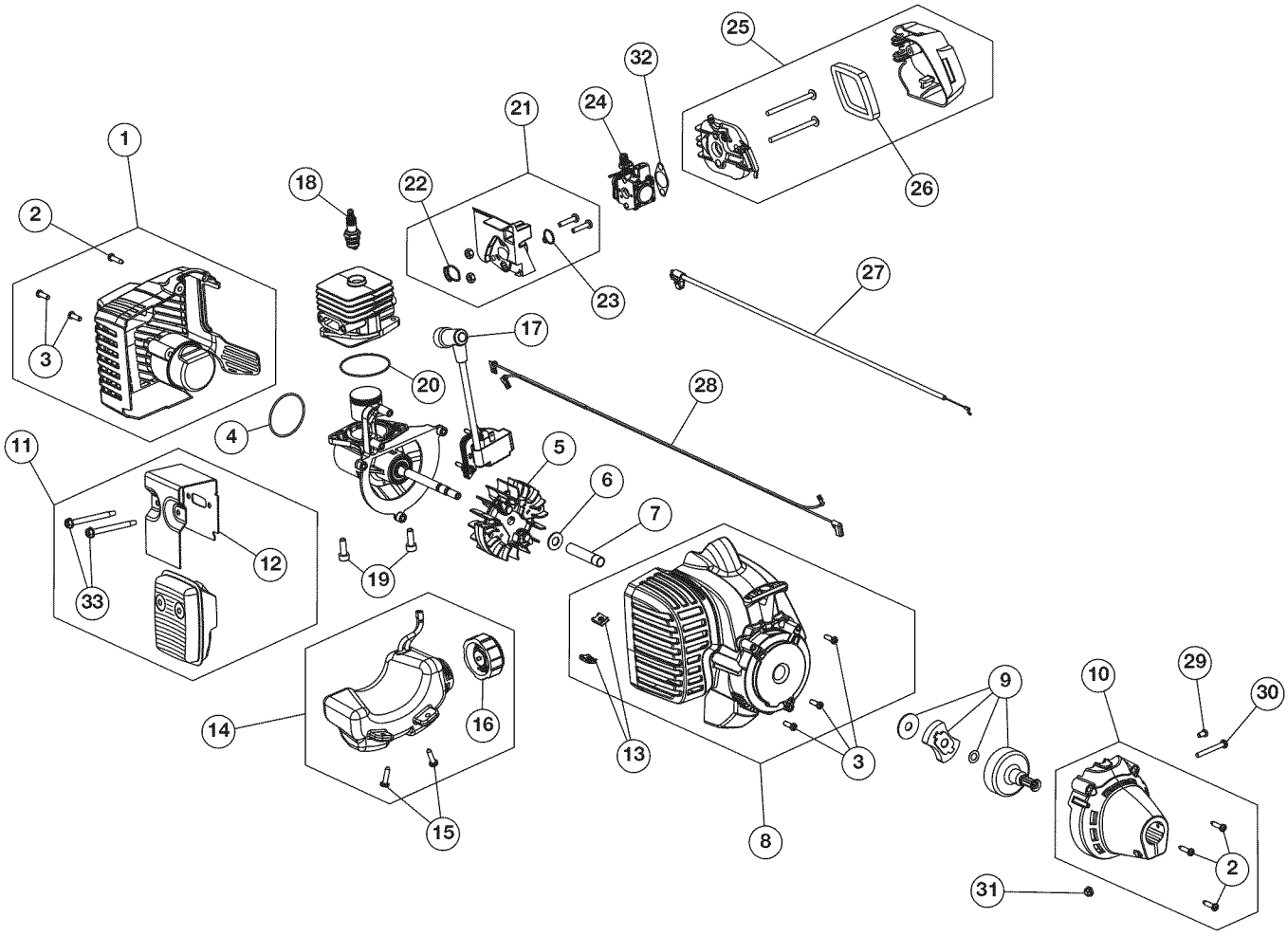
REPLACEMENT PARTS - MODEL 316.711471
2-CYCLE GAS TRIMMER

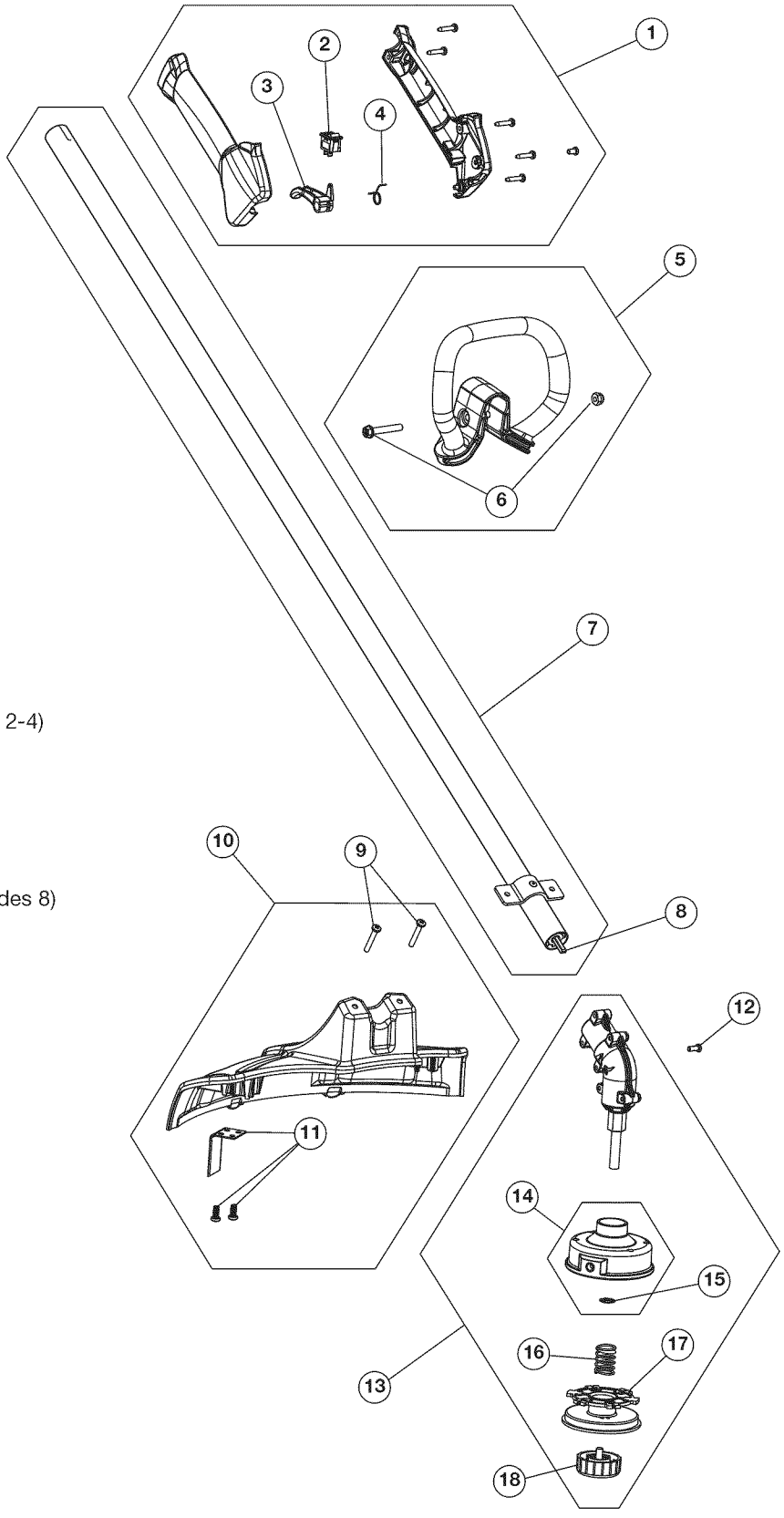


Item	Part No.	Description
1	753-06194	Rear Cover Assembly (includes 2 & 3)
2	791-181345	Cover Screw
3	791-181862	Housing Screw
4	753-06174	O-Ring
5	753-06175	Flywheel Assembly
6	753-06247	Washer
7	753-06218	Spacer
8	753-06794	Starter Housing (includes 3 & 13)
9	753-06180	Starter Clutch Assembly
10	753-06181	Clutch Cover (includes 2)
11	753-06418	Muffler Assembly (includes 12 & 33)
12	753-06419	Muffler Gasket
13	791-182366	U-shaped Nut
14	753-06183	Fuel Tank Assembly (includes 15 & 16)
15	791-181930	Tank Screw
16	791-182612	Fuel Cap
17	753-06420	Module Assembly
18	753-06193	Spark Plug

Item	Part No.	Description
19	791-182723	Crankcase Bolt
20	753-06275	Crankcase O-Ring
21	753-06189	Insulator Assembly (includes 22 & 23)
22	753-06184	Insulator O-Ring
23	753-06185	Carburetor O-Ring
24	753-06190	Carburetor
25	753-06415	Aircleaner Cover Assembly (includes 26)
26	753-06417	Aircleaner Filter
27	753-06188	Throttle Cable
28	753-06187	Lead Wires
29	791-182519	Anti-rotation Screw
30	753-04003	Clamp Screw
31	791-180217	Clamp Nut
32	753-06253	Air Cleaner Gasket
33	753-06294	Muffle Screws
*	753-06416	Short Block Assembly (includes Crankcase, Cylinder, Piston, 4-7 & 17-20)

* Items Not Shown

REPLACEMENT PARTS - MODEL 316.711471
2-CYCLE GAS TRIMMER



Item	Part No.	Description
1	753-06790	Throttle Housing Assembly (includes 2-4)
2	791-182405	Switch
3	753-04119	Throttle Trigger
4	791-182690	Throttle Trigger Spring
5	753-08042	D-Handle (includes 6)
6	753-06040	D-Handle Bolt
7	753-06228	Drive Shaft Housing Assembly (includes 8)
8	753-04117	Flexible Drive Shaft
9	753-06125	Shield Mounting Screw
10	753-06329	Shield Assembly (includes 9 & 11)
11	753-06126	Blade Assembly
12	753-05698	Anti-Rotation Screw
13	753-06571	Gearbox Assembly (includes 14-18)
14	753-04284	Outer Spool Assembly (includes 15)
15	791-610660	Retainer
16	791-610317B	Spring
17	753-1155	Inner Reel
18	791-153066B	Bump Head Knob Assembly
*	753-06707	Reel & Line Assembly

* Items Not Shown

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